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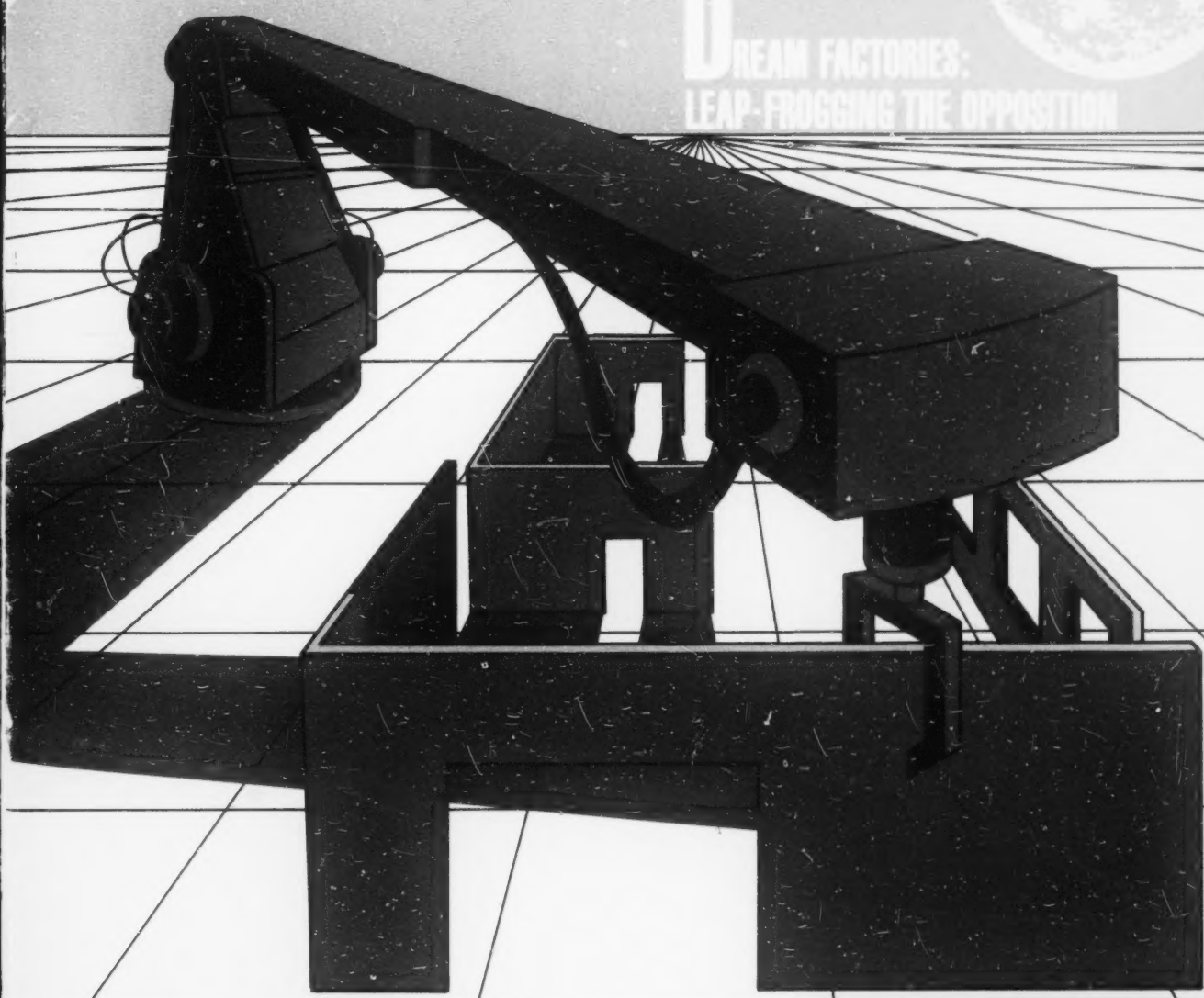
CHILTON'S

November 15, 1985

IRON AGE

MANUFACTURING MANAGEMENT

DREAM FACTORIES:
LEAP-FROGGING THE OPPOSITION

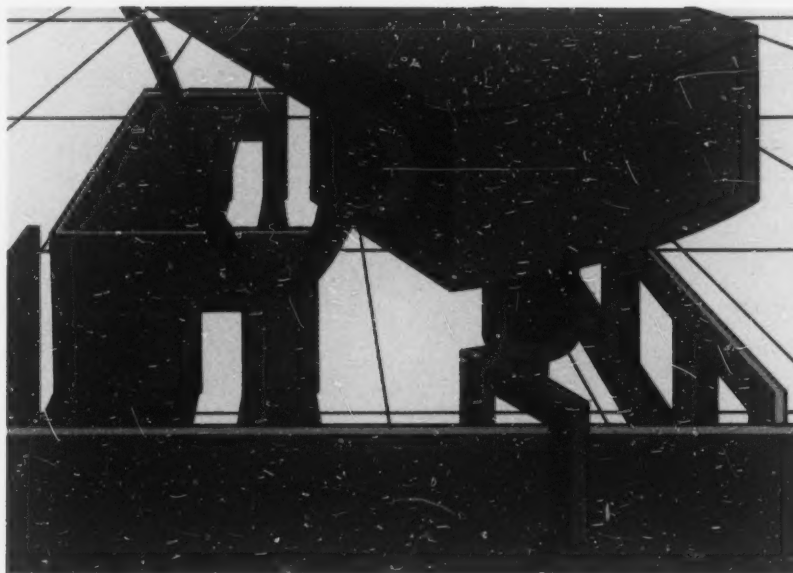


COPING
A DOGFIGHT

FACTORY
RAFT MARKET

IRON AGE

MANUFACTURING MANAGEMENT



Departments	
EDITORIAL STAFF	8
LETTERS	8
INDUSTRIAL BRIEFS	19
PRODUCT & EQUIPMENT REVIEW	72
BUSINESS STAFF	74
AD INDEX	74
MANAGEMENT SERVICE CARD	75
P&P DATA 10/21	80
FERROUS SCRAP 10/21	81
CLEARING HOUSE	82

Editorial	7
When push comes to shove, et al.	
Newswatch	13
Japan is accused of flooding the U.S. with aluminum can stock.	
Machine Tool Report	22
A West German tool builder has its eye on American job shops.	
You And Your Job	25
Materials engineers can work and go to school for an advanced degree.	
Dream Factory	26
Some manufacturers are converting yesterday's operations into tomorrow's.	
Hi-Tech Management	41
Corporate success can depend on how well new technology is handled.	
Aircraft	51
European airframe builders are landing in the U.S. market.	
Composites	65
Composite parts are shaping up in three dimensions.	
Technically Speaking	70
The Air Force is looking for better ways to make tail sections.	
Materials Report	79
A new steel trade accord is expected between the U.S. and Europe.	
Price Trends	84
Automobiles lead a new wave of price cuts.	
Next Issue: Fabricating Composites	

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A DOGFIGHT RAGES IN THE MID-SIZED AIRCRAFT MARKET



Smaller European airframe manufacturers have been carving out a niche in the commercial airframe manufacturing market.

BY AL SENIA

There is a new dogfight brewing in the skies over America.

The impending battle involves market share for smaller passenger airplanes. It pits small, plucky European companies against the two traditional U.S. giants of commercial aviation.

And when the smoke clears, the ramifications could be major for the aerospace industry, which has long been dominated by American manufacturing expertise but is becoming more internationalized.

With little fanfare, smart marketing and a good deal of lucky positioning, smaller European airframe manufacturers like British Aerospace and Netherlands-based Fokker Aviation have been carving out a niche in the commercial airframe

manufacturing market.

The Europeans recently scored breakthrough sales of new, 100-seat airplanes to U.S. airline companies like Piedmont Airlines, USAir, California-based Pacific Southwest Airlines (or PSA) and other regional airlines that sprang up in the aftermath of U.S. airline deregulation.

The new airplane sales have come at the direct expense of the two major U.S. commercial airframe manufacturers, Boeing Commercial Airplane Co. in Seattle and Douglas Aircraft, the McDonnell Douglas Corp. subsidiary based in Long Beach, Calif.

The two American companies are planning separate, multi-million dollar counterattacks against Fokker and British Aerospace so that they do not surrender an important segment of the manufacturing market. Both firms are moving toward launching derivative, down-sized versions of popular, existing airplanes: The Boeing 737 and the Douglas MD-80.

But the latest competitive wave

occurs during a period when the worldwide aircraft industry and its suppliers have been emerging from a steep recession that saw orders for new airplanes plummet in 1983 and only slightly improve last year.

The new, unexpected competition also comes at a time when the industry has been beset by stiff competition for sales, a continuing overabundance of used commercial airplanes and the emergence of another key overseas player, Europe's Airbus airframe manufacturing consortium.

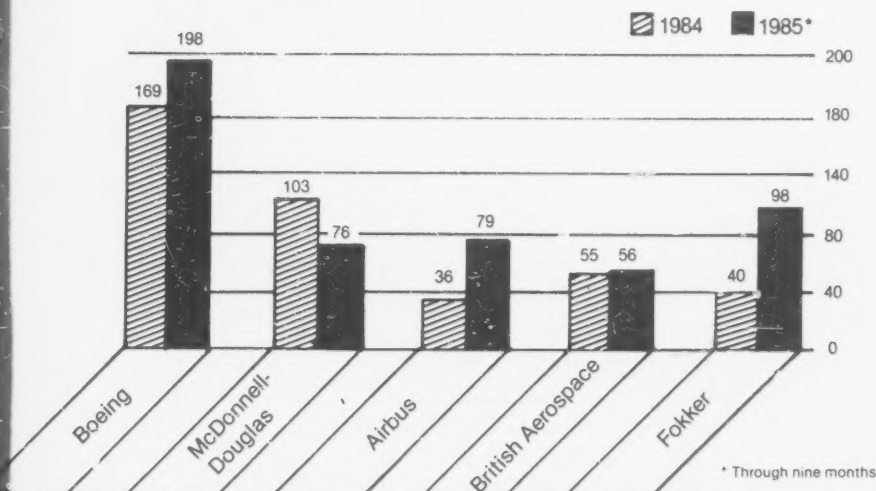
Airbus has sold 82 airplanes in the first nine months of this year, more than double its sales for all of 1984. These include 31 of the all-new technology A-320 airplane, a 150-seat, single aisle, short- to medium-range passenger twinjet that will not make its first flight until the spring of 1987.

Airbus scored a coup in May when Pan Am, a major U.S. airline, signed a \$1.1 billion contract to purchase 28 A-310 and A-320 aircraft.

(Cont. on p. 54.)

Flying the Competitive Skies

Firm Orders for New Aircraft (In Units)



The only other major U.S. airline Airbus has made inroads with is Eastern. In early October, Continental Airlines ordered three new A-300 transports and three used Airbus planes for delivery in 1986. The \$176 million order is subject to bankruptcy court approval.

Right place, right time

Airline company executives say what is happening to American companies in the aviation industry isn't much different than what happened to U.S. automakers earlier in this decade: Market conditions changed and overseas automakers benefitted from having smaller, more fuel efficient alternative products available for immediate purchase.

Only this time, the suppliers were European. Fokker Aircraft in August stunned the aviation community with the largest sale in the company's history: a \$350 million order from USAir for 20 new Fokker 100s, a medium-range jet powered by two Rolls Royce turbofan engines. The airline took options on an additional 20 planes. Fokker introduced the airplane, which seats between 100 and 105, earlier this year.

Swissair ordered eight of the planes last year, and KLM Royal

Dutch Airlines ordered 10 with options for five more. First deliveries to USAir should occur by the second half of 1988.

"It was a matter of having the right airplane available at the right time at the right price," said David K. Shipley, assistant vice president for public affairs with USAir. "Boeing was obviously a very strong contender with its 737, and we also looked at the (British Aerospace) BAe 146 and at Airbus.

"Fokker came forth with the Fokker 100. They agreed to make substantial changes to meet our requirements. It went right down to the last hour before we made our decision."

Mr. Shipley said USAir had made known to US manufacturers its desire for 100-seat jet to operate efficiently on the shorter spoke segments of the regional "hub and spoke" systems set up by many airlines in the wake of deregulation. Under the plan, airplanes save money and increase efficiency by utilizing many short flights to feed passengers into a central hub terminal where they switch planes and continue on to their destinations.

But the American manufacturers were slow to respond. So USAir, which currently owns 135 airplanes and has 23 138-seat Boeing 737s on

order, opted to buy foreign

"We felt Fokker has a solid worldwide support system in place and an excellent reputation for servicing the products they provide," Mr. Shipley explained.

Market Breakthroughs

Fokker officials believe the sale will make future North American orders easier to obtain. It also provides a customer base in North American that justifies an expansion of the customer support organization.

"Because of USAir's stature in the industry, other airlines may follow with orders for our airplanes," said Robert W. Hawk, public relations director for Fokker Aircraft, Inc., in Alexandria, Va.

More importantly, the order justifies Fokker's major gamble in November 1983 to invest \$300 million into launching two improved derivative airplanes, the F-100 and the 50-passenger F-50. The alternative for the company was to limit its role to that of a civilian parts subcontractor and supplier.

The USAir order has provided Fokker with substantial breathing room. It will keep the F-100 assembly line busy for 18 months. The F-100 production rate is scheduled to increase to 36 per year by the end of 1985. Officials say the production rate could increase in 1986.

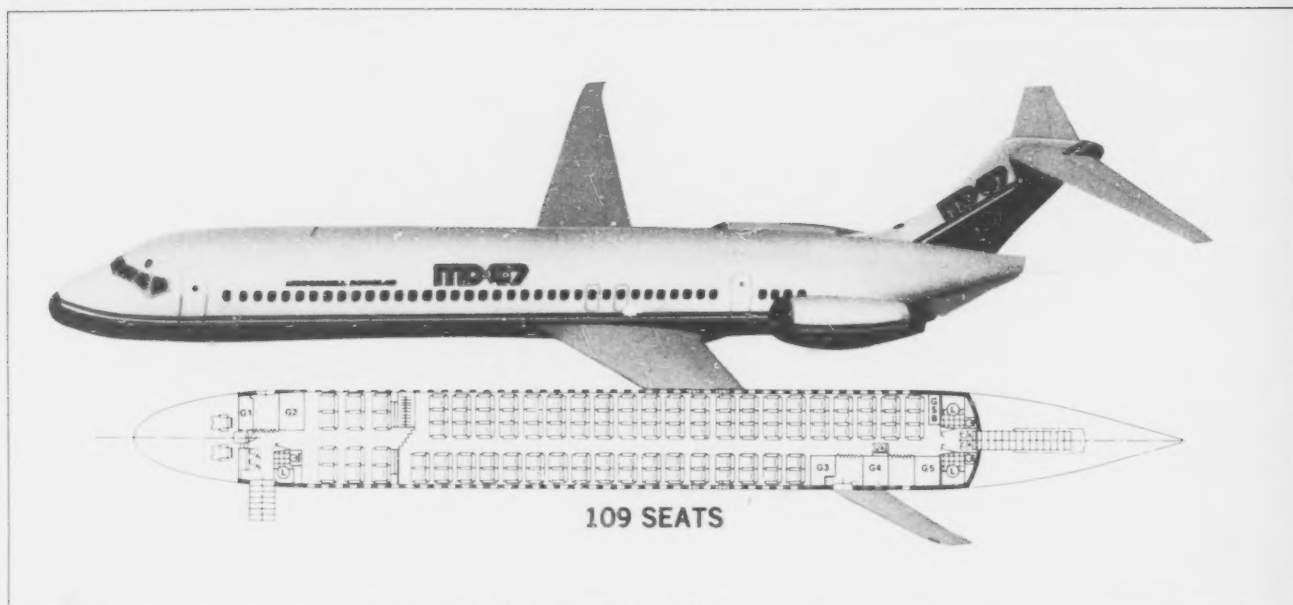
Fokker is scheduled to begin assembly of its first F-100 fuselage later this month.

The F-100, which is also being evaluated by Japanese and other European airlines, is a new technology replacement for the F-28 turboprop.

A second new airplane, the 50-seat Fokker, replaces the F-27. The plane is scheduled to make its first flight in November, and the company has received firm orders for 32 airplanes.

In all, Fokker has sold 100 airplanes this year, compared to 40 in 1984. These include five F-28s to Piedmont Airlines that will be delivered next year. Two additional F-28s were sold to Empire Air, a regional airline that is being acquired by Piedmont.

(Cont on p. 59.)



Douglas has moved ahead with its derivative MD-87 twinjet, a shrunken version of the highly popular MD-80 airplane.

Empire carries about 1.2 million passengers annually with a fleet of 13 twin-engine Fokker 28s. (Four more are on order.) Piedmont has 20 of the planes. (For comparison, the airline has 63 Boeing 737s in its fleet, 34 727s, and another 45 737s on order.)

Company officials say the F-28s will be used to service short haul routes, including a route expansion into several small Florida cities.

"It's ideally designed to fly frequent, intrastate service on short to intermediate range routes," said Don McGuire, vice president for public affairs for Piedmont.

Another incentive for Piedmont was financial. Fokker had taken several F-28s as trade-in aircraft and the manufacturer was willing to totally renovate and warranty the craft. Piedmont was able to grab its 20 planes for \$62 million, less than one-third of the price of other, new 100-seat aircraft.

Third World Spinoff

Fokker isn't the only small European company moving aggressively to outmuscle American manufacturers. British Aerospace has been successfully marketing three versions of its BAe 146 aircraft, which was originally designed for Third World markets.

The company currently has 61 firm orders for the BAe 146, including 39 in the North American market. Like Fokker, many of those orders came at the expense of the Douglas MD-80 and the Boeing 737.

"We've had very good sales in major countries," said Douglas W. Nelms, press office manager for British Aerospace, Inc., in Washington. "We didn't expect it to be that popular. It was designed to be a very rugged, simple airplane to fly in less developed countries. But it was the right thing at the right time for the U.S. market."

American customers include regional airlines like Aspen Air, Hawaii Air and Air Wisconsin. These companies join an eclectic international roster including Air Mali in Africa, CAAC in the People's Republic of China and the British Royal Air Force.

Like Fokker, British Aerospace began to be taken seriously as a competitor to the U.S. airplane manufacturers when it scored a major sales coup with a respected U.S. airline. This time, the customer was PSA, a western U.S. carrier that ordered 20 BAe 146s in 1983. Thirteen of the airplanes have been delivered.

"We have been downsizing our

fleet," explained William E. Hastings, director of public relations for San Diego, Calif.-based Pacific Southwest Airlines. "The BAe 146 met our needs. It has a low trip cost... and it is so quiet we can fly into the same kind of airport fields as a general aviation airplane."

PSA has used the BAe 146 to replace some older Boeing 727 jets and to service frequent commuter flights into smaller regional airports where stringent community noise standards exist.

"We had no interest in the BAe 146 originally," Mr. Hastings recalled. "But we saw it at the Paris Air Show and were impressed with its performance and efficiency. I don't think the British were even considering pitching it to the highly competitive market here. But it is going to prove to be a very cost efficient airplane."

U.S. Manufacturers Respond

Such sentiments don't appear to publicly rankle officials at Boeing and Douglas. But the inroads made by Fokker and British Aerospace appear to have caused enough chagrin to convince the U.S. manufacturers to address the 100-seat marketplace, even as they near multi-billion dollar decisions concerning a new-technology 150-seat airliner for

the 1990s and concentrate on marketing relatively new planes like Boeing's 757 and the Douglas MD-80.

Richard Schleh, a Boeing spokesman, says the company is actively talking to a number of airlines about marketing a smaller 100- to 120-seat version of the Boeing 737.

"Some interest in that size airplane has been expressed by a number of airlines," said Mr. Schleh. "But we have not launched the program yet. We want to be sure that if a sufficient market develops, we are represented."

"We've really looked at the market and determined we want to make an offering. We are now going around and saying: 'Are you interested?'"

Unofficially, industry officials are dubbing the derivative 737 the 737 short body or the 737-lite.

But an official launch is far from

certain because some officials believe the recent inroads made by British Aerospace and Fokker have dried up immediate demand.

Douglas, however, is moving more aggressively into the marketing fray. The company actually had plans several years ago to make a 110-seat MD 90 all-new aircraft, but the program was dropped in March 1984.

Instead, Douglas has moved ahead with its derivative (and cheaper) MD-87 twinjet, a shrunken version of the highly popular MD-80 airplane. The airplane's fuselage 17.5 ft shorter than the MD-80.

The MD-87 was launched in January 1985 after detailed market studies convinced officials there was worldwide demand for the plane.

Firm orders include eight from Finnair, four from Austrian Airlines and four from TDA Domestic Airlines of Japan.

Elayne Bendell, a Douglas spokeswoman, said the plane has a range of 3,000 miles with supplemental fuel tanks. It is also being offered as a specialty executive jet with a seating capacity of 20.

Douglas officials believe there is a global market for 1,200 such airplanes between 1985 and 1999.

The company also is moving toward development of a new technology 100-seat airplane initially dubbed the MD-91X that would utilize rear-mounted propfan engine technology. It would replace the MD-87 and the smaller 727s and 737s currently in service.

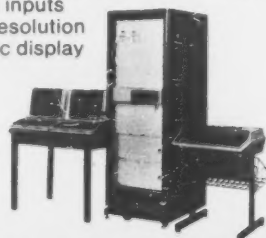
"The major incentive for development is that it would save fuel costs of an estimated 50 pct over a DC-9 of comparable size," Ms. Bendell explained.

No launch date has been set, but deliveries probably wouldn't begin until at least 1991. □

SYSTEM 1000 Advanced Data Acquisition System

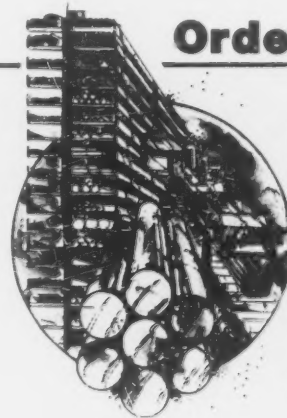
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MATERIALS PRICES

PRICE & PRODUCTION DATA

(Effective October 21, 1985)

Steel production by districts, thousands of tons
(000 omitted)

	Last Week	Two Weeks Ago	Month Ago	Year Ago
Northeast Coast	172	176	169	123
Pittsburgh	163	161	154	198
Youngstown	97	90	97	95
Lake Erie	148	139	143	137
Detroit	148	149	144	139
Chicago	457	488	476	351
Cincinnati	78	78	93	86
St. Louis	74	75	68	75
Southern	200	194	181	166
Western	86	86	69	77
U.S. Production	1,623	1,636	1,594	1,447

Source: American Iron & Steel Institute

Lake Superior Ore Prices

51.50% Fe Natural delivered lower Lake ports. Rail transportation, handling and unloading may be charged to the account of the buyer. Coarse ore 80¢ premium

Pellets (per iron unit natural)	gross-ton 59.4*
Pellets (per iron unit natural)	gross-ton 72.5-86.9**
Mesabi, regular-unscreened	gross-ton \$32.53
Mesabi, non-bessemer	gross-ton \$30.03-31.53***

*59.4¢—Pickands Matier, 8/1/85, delivered hold of vessel, upper Lake ports.

72.5¢—U.S. Steel as of 8/16/85. **86.9¢—Oglebay Norton 3/25/82; Hanna Mining and Cleveland-Cliffs, 2/26/82. *Effective 8/1/83.

NONFERROUS PRICES

(Effective October 21, 1985) Prices obtained in trade based on representative tonnages per gross ton delivered to consumer unless otherwise stated.

Primary Metal Prices

(cents per lb.)	current price	last price	date of change
Aluminum (LME)	43.86	45.01	10/21/85
Copper (C)	66.00- 67.00	65.00- 67.00	10/21/85
Lead	18.25- 19.00	19.00	10/18/85
Magnesium Ingot	148.00	143.00	5/25/84
Nickel (LME)	189.90	197.61	10/21/85
Titanium Sponge	555.00- 585.00	555.00	4/29/82
Zinc	38.00	41.00	9/24/85

ALUMINUM: Avg. for last week & previous week. COPPER (C) = cathode. LEAD: common grade. MAGNESIUM 99.8% pig delivered. NICKEL: Avg. for last week & previous week. ZINC: high grade.

Antimony, American Laredo, Texas	\$2.00
Beryllium-aluminum 5% Be, per lb. contained Be	\$236.00
Beryllium-copper, per lb. cont. Be	\$144.00
Beryllium 97% powder 200	\$197.00
Cadmium, ton lots	\$1.00-1.25
Calcium, ton lots, crown	\$3.76
Chromium, 99.8%	\$3.75
Cobalt, 99%, cathode	\$12.50
Gold per troy oz.	\$326.40
Indium, dollars per troy oz.	\$2.50
Iridium, dollars per troy oz.	\$440.00
Magnesium sticks, 10,000 lbs.	\$2.02
Mercury, per 76-lb. f.o.b. N.Y.	\$320.00-330.00
Molybdenum, lb. tech. moly oxides, 20 lb. MO can	\$6.85

STEEL PRODUCTION, COMPOSITE PRICES

(Effective October 21, 1985)

U.S. Steel Production

	Last Week	Two Weeks Ago	To Date 1985	To Date 1984
Net tons, in thousands	1,623	1,636	70,583	75,497
Capability Utilization Rate	63.8	64.3	65.9	69.7

Composite Prices

	This Week	Week Ago	Month Ago	Year Ago
Finished Steel Base* (¢/lb.—eff. 7/1/84)	27.582	27.582	27.582	27.582
Pig Iron** (Net ton= 2000 lbs.)	\$213.00	\$213.00	\$213.00	\$213.00
Scrap No. 1 hvy.*** (Gross ton=2240 lbs.)	\$ 71.50	\$ 71.50	\$ 72.17	\$ 83.17
No. 2 bundles	\$ 52.50	\$ 52.50	\$ 53.17	\$ 50.83

Scrap Comparison (Gross Ton)

No. 1 steel, Pittsburgh	\$ 73.50	\$ 73.50	\$ 75.50	\$ 88.50
No. 1 steel, Philadelphia	68.50	68.50	69.50	79.50
No. 1 steel, Chicago	72.50	72.50	72.50	81.50
No. 1 bundles, Detroit	66.50	66.50	69.50	75.50
Low Phos., Youngstown	69.50	69.50	70.50	78.50
No. 1 mach'y cast., Pgh	71.50	71.50	71.50	69.50
No. 1 mach'y cast., Phila	91.50	91.50	92.50	98.50
No. 1 mach'y cast., Chi	99.50	99.50	99.50	113.50

*Finished Steel Composite: Weighted index of steel bars, shapes, plates, wire, rails, black pipe, hot and cold rolled sheets and strips.

**Pig Iron Composite: Based on average prices for basic and foundry pig iron at representative producing points within the U.S.

***Steel Scrap Composite: Average of No. 1 hvy. melting steel scrap and No. 2 bundles delivered to consumers at Pittsburgh, Philadelphia and Chicago.

Nickel electro (PDCR)	\$3.29
Palladium, per troy oz.	\$101.00
Platinum, per troy oz.	\$320.00
Rhodium, per troy oz.	\$1,020.00
Silver ingots, per troy oz.	\$6.13
Vanadium	\$6.00
Zirconium sponge	\$12.00-17.00

(Per lb. unless otherwise noted)

Straits Tin Price

(U.S. cents per lb. EX-SMELTER, based on daily market in Penang in Malaysian dollars per kilo.)

Oct. 14—\$52.65	Oct. 17—\$57.49
Oct. 15—\$52.97	Oct. 18—\$53.33
Oct. 16—\$53.95	

Scrap Prices Brass Mill Scrap

(Cents per lb.; over 20,000 lbs. add 1¢ per lb.)

	Solids	Turnings
Copper	59	50 1/2
Yellow brass	52 1/8	42 1/2
Red brass	55 3/8	45
Comm. bronze	56 1/2	45 3/4
Mang. bronze	44	43
Free cutting rod ends	47	46

Custom Smelters Scrap

(Cents per lb., carload lots, del. refinery)

No. 1 copper wire	56
No. 2 copper wire	47
Light copper	38

Ingot Makers Scrap

(Cents per lb., carload lots, del. refinery)

No. 1 copper wire	52
No. 2 copper wire	43
Light copper	34
No. 1 composition	46
No. 1 comp. turnings	44
Hvy. yellow brass solids	33
Hvy. yellow brass turnings	30
Radiators	35

Aluminum

New mixed clips	33	— 34
Old sheet	30	— 31
Old cast	30	— 31
Clean dry borings	31	— 32

Dealers' Scrap

(Dealers' buying price f.o.b. New York in cents per pound)

Aluminum

Segregated clippings	24	— 26
Mixed L.C. clips	21	— 22
Old sheets and cast	20	— 21
Borings and turnings	16	— 18
Duraluminum clippings	24	— 25

Copper and Brass

No. 1 copper wire	45	— 46
No. 2 copper wire	37	— 39
Light copper	32	— 33
Radiators	30	— 31
No. 1 composition	39	— 40
No. 1 composition turnings	36	— 37
Cocks and faucets	28	— 29
Clean heavy yellow brass	27	— 28
Brass Pipe	28	— 29
New soft brass clippings	39	— 40

Lead

Heavy soft lead	6	— 8
Whole batteries	1	— 3
Type metal	16	— 17
Electrotype	13	— 15

Nickel

Nickel solids	115	— 125
Nickel rod ends	115	— 125
Nickel sheets, clips	115	— 125
Nickel turnings	25	— 35

Zinc

New zinc clippings	17	— 18
Old diecast zinc	13	— 14

NOTICE: Cleveland and Youngstown scrap price reporting change

Iron Age will change its method of reporting scrap prices in Cleveland and Youngstown from consumer delivered prices to broker buying prices beginning the effective date of Nov. 11. Those prices will appear in the Dec. 6 issue.

Much of the scrap in Cleveland and Youngstown is shipped to consumers in other cities. Broker buying prices more accurately reflect the variety of markets for Cleveland and Youngstown scrap. Also on Nov. 11 Iron Age will reduce the range in prices for Cleveland and Youngstown from \$3 to \$1. In addition, Iron Age will no longer list the Cleveland prices of mixed borings and turnings, drop forge flashings, steel axle turnings, railroad cast, cupola cast

and stove plate, since the volume of business in these grades is minimal. Iron Age will begin listing Cleveland prices for (1) mixed cast and (2) plate and structural steel, five ft and under.

In August and September, Iron Age raised the prices of many grades of Cleveland and Youngstown scrap to align them more closely with consumer delivered prices. For some of these grades, the actual market prices did not rise as much as the Iron Age prices did. Iron Age welcomes written comments regarding these changes. Write to Michael Marley, Managing Editor, Iron Age, Chilton Co., Chilton Way, Radnor, Pa. 19089.

EFFECTIVE OCTOBER 21, 1985

Effective October 21, 1985 Prices obtained in trade based on representative tonnages per gross ton delivered to consumer unless wise stated. Prices are the opinions of Iron Age editors and respondents, based on contacts with dealers, brokers, generators and users in the industry on the effective date listed above.

Iron Scrap Prices

Pittsburgh

No. 1 hvy. melting	\$ 73.00 to	\$ 74.00
No. 2 hvy. melting	63.00 to	64.00
No. 1 dealer bundles	88.00 to	89.00
No. 1 factory bundles (auto)	88.00 to	89.00
No. 2 bundles	54.00 to	55.00
No. 1 busheling	85.00 to	86.00
Machine shop turnings	7.00 to	8.00
Shoveling turnings	40.00 to	41.00
Cast iron borings	38.00 to	39.00
Low phos. punchings plate	90.00 to	91.00
Heavy turnings	63.00 to	64.00
No. 1 RR hvy. melting	80.00 to	81.00
Rails, 2 ft. and under	96.00 to	97.00
Scrap rails, random lgh	80.00 to	81.00
RR specialties	92.00 to	93.00
No. 1 machinery cast	71.00 to	72.00
Cupola cast	64.00 to	65.00
Heavy breakable cast	30.00 to	31.00
Stainless		
18-8 bundles and solids	530.00 to	540.00
18-8 turnings	430.00 to	440.00

Chicago

No. 1 hvy. melting	\$ 72.00 to	\$ 73.00
No. 2 hvy. melting	65.00 to	66.00
No. 1 dealer bundles	86.00 to	87.00
No. 1 factory bundles (auto)	85.00 to	86.00
No. 2 dealer bundles	59.00 to	60.00
No. 1 busheling	83.00 to	84.00
Shredder scrap	62.00 to	63.00
Machine shop turnings	41.00 to	42.00
Mixed borings and turnings	43.00 to	44.00
Shoveling turnings	45.00 to	46.00
Cast iron borings	45.00 to	46.00
Low phos. large crop	95.00 to	96.00
Low phos. punchings plate		
1 1/4 in. and heavier	111.00 to	112.00
Low phos. 2 ft. and under	106.00 to	107.00
No. 1 RR hvy. melting	76.00 to	77.00
Scrap rails, random lgh	82.00 to	83.00
Railroad rails	157.00 to	158.00
Rails, 2 ft. and under	105.00 to	106.00
RR couplers and knuckles	90.00 to	91.00
RR car axles	111.00 to	112.00
No. 1 machinery cast	99.00 to	100.00
Cupola cast	87.00 to	88.00
Stove plate	89.00 to	90.00
Steel car wheels	89.00 to	90.00
Stainless		
18-8 bundles and solids	530.00 to	540.00
18-8 turnings	445.00 to	455.00
430 bundles and solids	140.00 to	145.00
430 turnings	110.00 to	115.00

Philadelphia

No. 1 hvy. melting	\$ 67.00 to	\$ 70.00
No. 2 hvy. melting	58.00 to	61.00
No. 1 dealer bundles	80.00 to	83.00
No. 2 dealer bundles	47.00 to	45.00
No. 1 busheling	80.00 to	83.00
Shredder scrap	82.00 to	85.00
Machine shop turnings	24.00 to	27.00
Mixed borings and turnings	24.00 to	27.00
Shoveling turnings	39.00 to	42.00
Low phos. 5 ft. and under	76.00 to	79.00
Low phos. 2 ft. punchings	97.00 to	100.00
Electric furnace bundles	87.00 to	90.00
RR specialties	76.00 to	79.00
Rails, 2 ft. and under	100.00 to	103.00
Cupola cast	76.00 to	79.00
Heavy breakable cast	53.00 to	56.00
No. 1 machinery cast	90.00 to	93.00

Detroit

Brokers buying prices per gross ton on cars.		
No. 1 hvy. melting	\$ 52.00 to	\$ 53.00
No. 2 hvy. melting	51.00 to	52.00
No. 1 dealer bundles	66.00 to	67.00
No. 2 bundles	29.00 to	30.00
No. 1 busheling	65.00 to	66.00
Drop forge flashings	41.00 to	42.00
Machine shop turnings	40.00 to	41.00
Mixed borings and turnings	19.00 to	20.00
Shoveling turnings	40.00 to	41.00
Cast iron borings	23.00 to	24.00
Heavy breakable cast	34.00 to	35.00
Mixed cupola cast	49.00 to	50.00
Automobile cast	73.00 to	74.00
Stainless		
18-8 bundles and solids	500.00 to	510.00
18-8 turnings	360.00 to	390.00
430 bundles and solids	115.00 to	125.00

Youngstown

No. 1 hvy. melting	\$ 67.00 to	\$ 70.00
No. 2 hvy. melting	56.00 to	59.00
No. 1 dealer bundles	73.00 to	76.00
No. 2 dealer bundles	31.00 to	34.00
Machine shop turnings	24.00 to	27.00
Shoveling turnings	24.00 to	27.00
Low phos. plate	68.00 to	71.00
Electric furnace bundles	72.00 to	75.00
Galvanized bundles	64.00 to	67.00

Cleveland

No. 1 hvy. melting	\$ 55.00 to	\$ 58.00
No. 2 hvy. melting	46.00 to	49.00
No. 1 dealer bundles	77.00 to	80.00
No. 1 factory bundles	68.00 to	71.00
No. 2 bundles	29.00 to	32.00
No. 1 busheling	75.00 to	78.00
Machine shop turnings	16.00 to	19.00
Mixed borings and turnings	7.00 to	10.00
Shoveling turnings	24.00 to	27.00
Cast iron borings	17.00 to	20.00
Cut structural & plates, 2 ft. and under	97.00 to	100.00
Low phos. punchings plate	97.00 to	100.00
Drop large flashings	48.00 to	51.00
Foundry steel, 2 ft. & under	69.00 to	72.00
No. 1 RR hvy. melting	63.00 to	66.00
Rails, 2 ft. and under	90.00 to	93.00
Rails, 18 in. and under	94.00 to	97.00
Steel axle turnings	57.00 to	60.00
Railroad cast	89.00 to	92.00
No. 1 machinery cast	88.00 to	91.00
Cupola cast	55.00 to	58.00
Stove plate	54.00 to	57.00
Stainless		
18-8 bundles	485.00 to	495.00
18-8 turnings	365.00 to	375.00
430 bundles	90.00 to	100.00

Buffalo

Brokers buying prices per gross ton on cars.		
No. 1 hvy. melting	\$ 53.00 to	\$ 54.00
No. 2 hvy. melting	43.00 to	44.00
No. 1 busheling	67.00 to	68.00
No. 1 dealer bundles	66.00 to	67.00
No. 2 bundles	30.00 to	31.00
Machine shop turnings	16.00 to	17.00
Mixed boring and turnings	16.00 to	17.00
Shoveling turnings	22.00 to	23.00
Cast iron borings	24.00 to	25.00
Low phos. plate	75.00 to	76.00
Structural and plate, 2 ft. and under	79.00 to	80.00
Rails, 2 ft. and under	79.00 to	80.00
Scrap rails, random lgh	64.00 to	65.00
No. 1 machinery cast	77.00 to	78.00
No. 1 cupola cast	59.00 to	60.00

St. Louis

No. 1 hvy. melting	\$ 45.00 to	\$ 46.00
No. 2 hvy. melting	34.00 to	35.00
Foundry steel, 2 ft.	39.00 to	40.00
No. 1 dealer bundles	45.00 to	46.00
No. 2 bundles	30.00 to	31.00
Machine shop turnings	15.00 to	16.00
Shoveling turnings	21.00 to	22.00
Cast iron borings	30.00 to	31.00
No. 1 RR hvy. melting	53.00 to	54.00
Rails, random length	59.00 to	60.00
Rails, 18 in. and under	72.00 to	73.00
RR specialties	70.00 to	71.00
Cupola cast	71.00 to	72.00
Heavy breakable cast	49.00 to	50.00
Stove plate	89.00 to	90.00
Steel car wheels	81.00 to	82.00
Rolling rails	89.00 to	90.00
Unstripped motor blocks	64.00 to	65.00

Birmingham

No. 1 hvy. melting	\$ 73.00 to	\$ 74.00
No. 2 hvy. melting	69.00 to	70.00
No. 1 dealer bundles	73.00 to	74.00
No. 2 bundles	48.00 to	49.00
No. 1 busheling	73.00 to	74.00
Shredder scrap	88.00 to	89.00
Machine shop turnings	25.00 to	26.00
Shoveling turnings	39.00 to	40.00
Cast iron borings	38.00 to	39.00
Electric furnace bundles	66.00 to	67.00
Elec. furnace, 3 ft. & under	69.00 to	70.00
Structural and plate, 2 ft.	90.00 to	91.00
Structural and plate, 4 ft.	85.00 to	86.00
No. 1 RR hvy. melting	85.00 to	86.00
Scrap rails, random lgh	77.00 to	78.00
Rails, 2 ft. and under	90.00 to	91.00
Angles and splice bars	84.00 to	85.00
No. 1 cupola cast	84.00 to	85.00
Unstripped motor blocks	74.00 to	75.00

Cincinnati

Brokers buying prices per gross ton on cars		
No. 1 hvy. melting	\$ 54.00 to	\$ 55.00
No. 2 hvy. melting	53.00 to	54.00
No. 1 dealer bundles	64.00 to	65.00
No. 2 bundles	34.00 to	35.00
Machine shop turnings	7.00 to	8.00
Shoveling turnings	10.00 to	11.00
Cast iron borings	15.00 to	16.00
Low phos. 18 in. and under	79.00 to	80.00
Rails, random length	59.00 to	60.00
Rails, 2 ft. and under	74.00 to	75.00
No. 1 cupola cast	89.00 to	90.00
Heavy breakable cast	24.00 to	25.00
Drop broken cast	71.00 to	72.00

New York

Brokers buying prices per gross ton on cars		
No. 1 hvy. melting	\$ 44.00 to	\$ 45.00
No. 2 hvy. melting	35.00 to	36.00
No. 2 dealer bundles	20.00 to	24.00
Mixed borings and turnings	10.00 to	11.00
Machine shop turnings	4.00 to	6.00
Shoveling turnings	10.00 to	12.00
Clean cast chem borings	35.00 to	36.00
No. 1 machinery cast	79.00 to	80.00
Mixed yard cast	50.00 to	51.00
Heavy breakable cast	10.00 to	12.00
Stainless		
18-8 prepared solids	490.00 to	500.00
18-8 turnings	390.00 to	400.00
430 prepared solids	90.00 to	100.00
410 solids	75.00 to	85.00

Boston

Brokers buying prices per gross ton on cars		
No. 1 hvy. melting	\$ 51.00 to	\$ 53.00
No. 2 hvy. melting	41.00 to	43.00
No. 1 dealer bundles	53.00 to	55.00
No. 2 bundles	34.00 to	36.00
No. 1 busheling	59.00 to	61.00
Shredder scrap	61.00 to	63.00
Machine shop turnings	12.00 to	14.00
Shoveling turnings	18.00 to	20.00
No. 1 machinery cast	75.00 to	80.00
Mixed cupola cast	46.00 to	48.00
Heavy breakable cast	8.00 to	10.00

San Francisco

No. 1 hvy. melting	\$ 38.00 to	\$ 40.00
No. 2 hvy. melting	32.00 to	34.00
No. 1 dealer bundles	29.00 to	31.00
No. 2 dealer bundles	17.00 to	19.00
Machine shop turnings	8.00 to	9.00
Cast iron borings	8.00 to	9.00
No. 1 cupola cast	80.00 to	82.00

Los Angeles

No. 1 hvy. melting	\$ 38.00 to	\$ 40.00
No. 2 hvy. melting	32.00 to	34.00
No. 1 dealer bundles	29.00 to	31.00
No. 2 dealer bundles	16.00 to	18.00
Machine shop turnings	13.00 to	14.00
Shoveling turnings	10.00 to	11.00
Cast iron borings	8.00 to	9.00
Elec. furnace, 1 ft. and under (foundry)	70.00 to	72.00
No. 1 cupola cast	72.00 to	74.00

Seattle

No. 1 hvy. melting	60.00 to	62.00
No. 2 hvy. melting	51.00 to	53.00
No. 2 bundles	35.00 to	37.00
No. 1 cupola cast	89.00 to	90.00
Mixed yard cast	80.00 to	82.00

Hamilton, Ont.

Brokers buying prices per gross ton on cars		
No. 1 hvy. melting	\$ 82.00	
No. 2 hvy. melting, cut 2 ft. and under	72.00	
No. 1 dealer bundles	83.00	
No. 2 bundles	58.00	
Mixed steel scrap	53.00	
Bush new fact prep'd	83.00	
Bush new fact unprep'd	64.00	
Machine shop turnings	35.00	
Short steel turnings	35.00	
Mixed borings and turnings	20.00	
Cast scrap	89.00	

Houston

Brokers buying prices per gross ton on cars		
No. 1 hvy. melting	\$ 67.00 to	\$ 68.00
No. 2 hvy. melting	54.00 to	55.00
No. 2 bundles	40.00 to	41.00
Machine shop turnings	11.00 to	12.00
Crushed turnings	30.00 to	31.00
Shredder scrap	74.00 to	75.00
Cut structural plate, 2 ft. and under	97.00 to	98.00
Cut structural plate, 5 ft. and under	79.00 to	80.00
Unstripped motor blocks	57.00 to	58.00
Cupola cast	83.00 to	84.00

AUTOS LEAD IN NEW WAVE OF PRICE CUTS

September was a ho-hum month for prices; they were down—again.

Producers' prices for finished goods fell 0.6 pct from August.

To nobody's surprise, the price story for September was centered in the auto industry. As noted on the table here, prices of autos fell by 8.1 pct from August. Further, tags on both light and heavy trucks also showed big slashes.

Here's the U.S. Labor Dept.'s explanation for the sharp price slide in total finished goods in September: "Sharply lower prices for motor vehicles, largely reflecting efforts by domestic manufacturers to liquidate inventories of 1985 models by offering customers liberalized financing terms, were responsible for most of the September decline in the Finished Goods Price Index."

The September price slide was not in autos alone. As noted on the table, nine of the 22 metalworking product categories registered price declines during the month.

Further evidence of the continuing softness in producer prices was seen in cuts made in all stages of goods processing. Prices of intermediate goods were unchanged in September after falling for three straight months. And prices of crude materials were down 0.3 pct—the ninth straight month of lower tags.

An example of crude materials is iron and steel scrap. An example of intermediate goods is the sheet metal produced from the scrap. And examples of finished goods are the autos that consume much of the sheet metal.

Tags on capital equipment offer another sign of the pervasive and extensive softness in prices. In September, prices for capital goods as measured by the producer goods index were the same, almost to the dollar, as they were far back in the first month of the year.

Latest Month Covered: September 1985

Products	Index Reading For Month (1967 = 100)	Pct Change From Previous Month	Pct Change From Year-Ago Month
Metal Cutting Machine Tools	398.1	+ 0.3	+ 2.9
Metal Forming Machine Tools	434.8	0	+ 2.2
Agricultural Machinery & Equip.	337.4	— 0.3	+ 0.1
Construction Machinery & Equip.	362.8	+ 0.1	+ 1.6
Industrial Process Furnace & Ovens	385.5	0	+ 2.3
Industrial Material Handling Equip.	295.1	— 0.2	+ 1.6
Pumps, Compressors & Allied Equip.	357.4	+ 0.1	+ 2.2
Fluid Power Equip. (Dec. 1970 = 100)	265.0	0	+ 1.4
Mechanical Power Transmission Equip.	339.8	— 0.1	+ 2.9
Automobiles	209.5	— 8.1	— 1.3
Motor Trucks—Light	272.9	— 7.1	+ 1.7
Motor Trucks—Heavy	316.7	— 5.0	— 3.4
Railroad Equipment	364.6	0	+ 2.0
Fabricated Metal Structural Products	315.1	0	+ 1.0
Electric Motors	351.6	+ 0.1	— 3.4
Valves & Fittings (Dec. 1982 = 100)	105.1	+ 0.2	+ 2.3
Ball & Roller Bearings	353.5	— 0.2	+ 2.7
Cutting Tools & Accessories	286.7	0	+ 2.4
Heating Equipment	261.5	+ 0.2	+ 2.3
Plumbing Fixtures & Brass Fittings	313.6	0	+ 3.0
Metal Containers	357.7	— 0.1	+ 1.5
Miscellaneous Metal Products	302.5	— 0.2	+ 2.3

Data based on U.S. Labor Dept.'s Producer Price Index